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**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

BASIC
IMAGERY
INTERPRETATION
REPORT

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IRKUTSK AIRFRAME PLANT 39 (S)

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**STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR**

APRIL 1979

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INSTALLATION OR ACTIVITY NAME	COUNTRY
Irkutsk Airframe Plant 39	UR

UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	52-21-31N 104-12-16E				

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MAP REFERENCE

PACAF. USATC, Series 200, Sheet 0200-22, scale 1:200,000

LATEST IMAGERY USED

NEGATION DATE (If required)

NA

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ABSTRACT

1. (TSRZU) Irkutsk Airframe Plant 39 is in the Trans-Baikal Military District of the USSR, 9.8 kilometers (km) northwest of the center of the city of Irkutsk and approximately 178 km northeast of the nearest point on the Soviet-Mongolian border. At present, Plant 39 is involved in the production of the trainer (FLOGGER C) and the ground attack (FLOGGER D/F) variants of the FLOGGER fighter, as well as component parts for the BACKFIRE bomber. The plant contains 111 buildings (not including minor support buildings) and [] of floor-space. Another [] of floorspace are under construction.

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2. (TSR) This report includes a description of Irkutsk Airframe Plant 39 and its collocated test and flyaway field, Irkutsk Northwest Airfield. A brief history of the plant and a discussion of its production activity since its initial imaging on KEYHOLE photography of [] (Mission 9044) are also included.

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3. (TSR) This report includes a location map, eight annotated photographs, and two tables, one of mensural and chronological data, and one of production data. The information cutoff date for this report is []. The information contained in this report satisfies the basic reporting requirement for this target.

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INTRODUCTION

4. (S/WNINTEL) Irkutsk Airframe Plant 39 is in an industrial area along the Angara River (Figures 1 and 2). It is 2.0 km south of the nearest point of the river, 9.8 km northwest of the

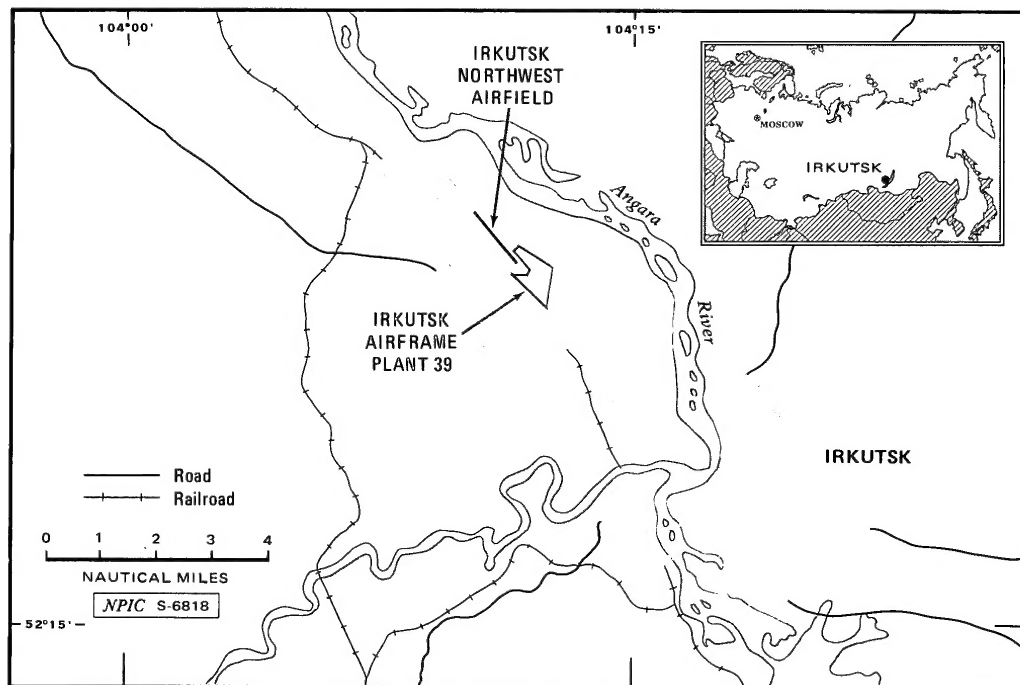


FIGURE 1. LOCATION OF IRKUTSK AIRFRAME PLANT 39, USSR

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center of the city of Irkutsk, and approximately 178 km northeast of the nearest point on the Mongolian border. Irkutsk Northwest Airfield () is collocated with the plant and serves as its test and flyaway field (Figures 2 and 3).

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5. (TSR) There has been little recent construction at Plant 39. Since the plant was first imaged on large-scale satellite photography in 1966, only () of floorspace have been completed.

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BASIC DESCRIPTION

Plant History

6. (S/WNINTEL) Irkutsk Airframe Plant 39 was originally known as Irkutsk Aircraft Plant Stalin 125 when construction began in mid-1932. Construction was completed by mid-1934 and aircraft have been produced at the plant ever since. The plant was expanded in December 1941 when the evacuated Aircraft Plant 39 from Moscow was added. During World War II the Plant received awards for its output.¹

7. (S) Since the end of World War II, Plant 39 has been involved in several aircraft fabrication programs. In succession, the BAT (TU-2), BOSUN (TU-14), BEAGLE (IL-28), and CUB (AN-12) were produced at the plant. In 1960, the plant began production of the BREWER/MAESTRO (YAK-28/28U). COKE (AN-24) and FLOGGER (MiG-23/27) have also been produced at the plant.²

Construction

8. (TSR) Irkutsk Airframe Plant 39 was first observed on satellite imagery of poor interpretability in August 1962. Plant 39 has undergone little change since 1962, and its basic configuration remains the same. The plant covers 118.5 hectares of land and is road, rail, and air served. The plant is dominated by its only assembly/final assembly building (Figure 3 and Table 1, item 97). Sections a and b of item 97 were already complete when the plant was observed in 1962, but only eight bays of section c and none of section d had been completed. Two more bays in section c had been completed by (). The remaining three bays in section c and all of section d had been completed by (). (Dotted lines on Figure 3 indicate portions of section c which were completed by dates specified in the "Remarks" section of Table 1). The construction status of only two other buildings—the final checkout hangar (item 43) and the maintenance building (item 49)—could be confirmed on the imagery of (). Both buildings were complete by that date. Other buildings were probably complete by August 1962, but the image interpretability precluded a determination of their status.

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9. (TSR) With the receipt of the first () the construction status of the remaining buildings was determined. On Figure 3, those buildings and sections of buildings which were confirmed as complete by () are outlined in black. Buildings and sections of buildings which have been completed since that time are outlined in red.

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10. (TSR) A new final checkout hangar (item 50) in the late stage of construction was the only major building project still in progress at Plant 39 as of (). The hangar bay section is much larger than either hangar bay of the older final checkout hangar (item 43). The new hangar is () and contains () square meters of floorspace, while the sections of the old building are () and contain () of floorspace, respectively. In addition, two nearby associated personnel shelters (items 50d and e) adjoining the new hangar are also in the late stage of construction.

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Irkutsk Northwest Airfield

11. (S/WNINTEL) Irkutsk Northwest Airfield is the test and flyaway field for Plant 39. The airfield is immediately adjacent to the northwestern boundary of the plant (Figure 2). The reference point (RP) is the middle of the concrete runway.

12. (TSR) The airfield (Figure 4) has a single serviceable concrete runway with overall dimensions of 2,513 by 70 meters. The runway is oriented on a northwest/southeast () (degree) azimuth. The concrete runway is paralleled by a sod runway which is approximately 2,084 meters long.

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Table 1.
Irkutsk Airframe Plant 39, USSR
(Keyed to Figure 3)
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Item Description						Item Description						Item Description					
Dimensions (m)		Floorpace (sq m)		Date Observed	Remarks	Dimensions (m)		Floorpace (sq m)		Date Observed	Remarks	Dimensions (m)		Floorpace (sq m)		Date Observed	Remarks
L	W	H				L	W	H				L	W	H			
1	Storage bldg					47	Storage bldg				Quonset type	82	Shop bldg				25X1
2	Storage bldg					48	Storage bldg					83	Support bldg				
3	Storage bldg					49	Maintenance bldg				Uson	84	Support bldg				
4	Storage bldg					50	Final checkout					85	Support bldg				
5	Storage bldg						hanger					86	Subassembly/engr bldg				
6	Storage bldg					a	Admin sec					a	Subassembly sec				
b	Old sec					b	Hanger sec					b	Engr sec				
7	Storage bldg					c	Admin sec					87	Support bldg				
8	Support bldg					d	Personnel shelter					88	Support bldg				
9	Transshipment bldg/warehouse					a	Personnel shelter					89	Support bldg				
10	Carpentry shop					51	Support bldg					90	Support bldg				
11	Support bldg					52	Storage bldg					91	Powerplant				25X1
12	Support bldg					53	Storage tank				At least	92	Support bldg				
13	Wood treatment bldg					54	Storage tank				At least	93	Storage bldg				
14	Support bldg					55	Small vertical prob pressure tanks (1 ft)				At least	94	Storage bldg				
15	Storage bldg					56	Storage bldg					95	Support bldg				
16	Storage bldg					57	Storage bldg				Quonset type	96	Shop bldg				25X1
17	Storage bldg					58	Admin/storage bldg					97	Assembly-final assembly bldg				
18	Storage bldg					a	Storage sec				2 stories	a	Final assembly sec				
19	Storage bldg					b	Admin sec					b	Shop/sub-assembly sec				
20	Support bldg					c	Storage sec					c	Assembly sec				
21	Storage bldg					59	Storage bldg					d	Admin/engr sec				25X1
22	Storage bldg					60	Support bldg										25X1
23	Storage bldg					61	Support bldg										
24	Support bldg					62	Powerplant										
25	Prob forgo					63	Support bldg										
26	Storage bldg					64	Warehouse										
27	Subassembly bldg					65	Storage bldg										
28	Support bldg					66	Shop bldg										
29	Warehouse					a	Shop sec										
30	Storage bldg					b	Shop sec										
31	Warehouse					c	Admin/engr sec										
32	Warehouse					d	Shop sec										
33	Warehouse					67	Support bldg										
34	Storage bldg					68	Support bldg										
35	Support bldg					69	Support bldg										
36	Storage bldg					70	Support bldg										
37	Storage bldg					71	Support bldg										
38	Warehouse					72	Shop bldg										
39	Storage bldg					a	Shop sec										
40	Shop bldg					b	Shop sec										
41	Support bldg					c	Shop sec										
42	Support bldg					d	Shop sec										
43	Final checkout					a	Admin/engr sec										
44	Support bldg					73	Shop bldg				3 stories						
45	Storage bldg					74	Support bldg										
46	Storage bldg					75	Support bldg										
47	Storage bldg					76	Support bldg										
48	Storage bldg					77	Support bldg										
49	Storage bldg					78	Support bldg										
50	Storage bldg					79	Shop bldg										
51	Storage tank					80	Storage tanks (2)										
52	Storage tank					81	Storage tank										

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13. (S/WNINTEL) The airfield is serviced by two short taxiways from the plant. Both extend to the plant production-associated parking apron at the airfield, one from the parking apron outside the assembly/final assembly building (Figure 3, item 97) and the other from the two bays of the old final checkout hangar (item 43). The plant production-associated parking apron serves not only as a parking facility for new aircraft but also as a short parallel taxiway for the airfield. The apron is connected to the main concrete runway by an end connecting link and a crossover link. The other parking area at the airfield is associated with the plant but does not support production aircraft. Instead, it supports transport aircraft that are probably related to logistics.

14. (TSR) Navigational aids at the airfield are an air-warning (AW) radar site, a ground-controlled approach (GCA) radar site, a short-range navigation radar site, an electronics site, threshold lights, and an inner marker beacon.

15. (TSR) Arresting wires are at the southeast end of the concrete runway. A POL storage area and a weapons/electronics test and calibration facility (Figure 5) are also at the airfield.

Production

16. (TSRZU) Since August 1962, three aircraft fabrication programs have taken place at this plant: BREWER/MAESTRO (YAK-28/YAK-28U), COKE (AN-24), and FLOGGER (MiG-23/27). Plant 39 is also involved in the production of BACKFIRE wing components.^{2/4}

17. (TSRZU) BREWER/MAESTRO production began in 1960 and continued until 1973.⁵ The highest number of BREWER observed at Plant 39 was 19 on imagery of [redacted] 25X1
BREWER continued to be seen through the first quarter of 1973 [redacted] 25X1
During the production life of the BREWER, a mean count of 5.6 BREWER were present on imagery of Plant 39. BREWER have been seen at the plant since 1973; however, the small numbers, usually only a single aircraft, indicate that they have been present for plant-level maintenance or retrofit rather than as part of a production program. BREWER were last seen at the plant on imagery of [redacted] 25X1

18. (TSR) COKE production at Plant 39 began in 1966 and probably continued through the third quarter of 1971. During this period, newly produced COKE were usually parked on the plant production-associated aircraft parking apron. No COKE have been observed parked on this apron since [redacted] COKE have been seen at Plant 39 since that time, but they were only in the logistics-associated parking area. 25X1

FLOGGER Production

19. (TSR) FLOGGER (MiG 23/27) were first observed at Plant 39 on [redacted] 25X1
[redacted] Since that time three models have been observed: FLOGGER A (MiG-23), FLOGGER C (MiG-23), and FLOGGER D/F (MiG-27). 25X1

20. (TSR) FLOGGER A were observed twice at this plant, on imagery of [redacted] 25X1
[redacted] On the first occasion, only one FLOGGER 25X1
could be identified. On the second coverage, however, nine aircraft were present. Image interpretability precluded positive identification of FLOGGER A on other imagery acquired within the same timeframe as the two coverages cited above. 25X1

21. (TSR) FLOGGER C (Figure 6) were first observed at Plant 39 on imagery of [redacted] 25X1
[redacted] and have been identified, image interpretability permitting, on later coverages, most recently on imagery of [redacted] 25X1

22. (TSR) FLOGGER D/F (Figure 7) were first observed on imagery of [redacted] and have also been identified on later coverages, most recently on imagery of [redacted] 25X1
Image interpretability has not permitted differentiating the FLOGGER D from the FLOGGER F. 25X1

23. (TSR) Since FLOGGER were first identified at the plant, the numbers observed gradually increased to a high count of 56 on [redacted]. Throughout the remainder of 1973, the mean count of FLOGGER observed at Plant 39 was 12. This decline, and the continued low count of FLOGGER observed through mid-1977 (Table 2) suggests two possibilities—a slowdown in the production rate of FLOGGER at this plant during that period, or an accumulation of FLOGGER to unusually high levels from 1971 through March 1973. 25X1

24. (TSR) While the mean count of FLOGGER observed at Plant 39 in 1977 was 7.2 aircraft, dividing the year into two six-month periods revealed that the mean number of FLOGGER observed on coverages in the first half of the year was 3.8. Observations during the second half of the year increased to a mean count of 10.2.

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Table 2.
FLOGGER Aircraft Observed at Irkutsk Airframe Plant 39

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Year	Mean Number Observed	Standard Deviation*	High Count	Low Count	Usable Coverages	Remarks
1971	3.3	3.6	9	0	9	First identification of FLOGGER [] FLOGGER A [] and FLOGGER C []
1972	35.0	12.9	52	21	5	
1973	31.75	23.2	56	10	4	Highest count ever on [] number declined to 14 by next coverage []
1974	6.5	5.7	19	1	11	First identification of FLOGGER D/F on []
1975	11.0	6.8	23	3	6	
1976	10.25	3.4	14	6	4	
1977	7.2	5.5	25	1	19	High count seen on [] imagery; second highest count []
1978	18.7	6.5	31	7	32	[] imagery showed highest count since []

*Applies to mean numbers observed.

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25. (TSR) The mean number of FLOGGER observed at Plant 39 continued to increase during 1978, slowly during the first half of the year (with a mean of 11.5), and more rapidly during the last half of the year (with a mean of 21.3). On the last coverage available for this report, 5 December 1978, 31 FLOGGER were observed at the plant, the highest count since the high count observed in March 1973. If this increase in the number of FLOGGER observed and/or produced continues, it could explain the need for the new final checkout hangar (item 50, Figure 3).

BACKFIRE Component Production

26. (TSRZU) Irkutsk Airframe Plant 39 is probably involved in the production of components for the BACKFIRE bomber. Although there has been no photographically derived confirmation of this, information obtained from other sources^{3,4} suggests that this is the case. Information derived from intercepted communications between Plant 39 and Kazan Airframe Plant Gorbunov 22 [] the BACKFIRE production facility, in March and April 1977 indicated that BACKFIRE wing bolts were produced at Plant 39.⁴ Fuel system components for the BACKFIRE were also produced at Plant 39, which may be a subcontractor for the wings of the BACKFIRE version 45.03⁵ (BACKFIRE B).

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COCK Activity at Plant 39

27. (TSR) COCK aircraft have been observed at Plant 39 and the flyaway airfield several times (Figures 7 and 8), beginning with imagery of []. The COCK were probably involved with the shipment of FLOGGER aircraft. On one occasion, in February 1977 (Figure 8), two FLOGGER without wings were observed awaiting loading immediately behind a COCK. Transport aircraft at Plant 39 are usually observed in the logistics-associated aircraft parking area. COCK aircraft, however, have always been parked on the opposite side of the flyaway field. This, along with the observed loading activity, indicates that COCK are probably present for the purpose of airlifting FLOGGER aircraft.

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FOXBAT B/D with Unidentified Stores

28. (TSR) On [] a FOXBAT B/D aircraft was observed at Irkutsk Plant 39 (Figure 9). This was the first sighting of a FOXBAT B/D at this plant. The sighting of the FOXBAT B/D was unusual not only because it was at this plant but also because unidentified stores were mounted on the aircraft, one under each wing. FOXBAT B and D are reconnaissance versions of FOXBAT; it is highly unusual to see them with stores mounted under their wings. The nature and use of the stores could not be determined. The FOXBAT B/D was present on two subsequent coverages, [], but it has not been seen since. The September 1977 sighting at Irkutsk Plant 39 was only the second time that a FOXBAT B/D has been identified with mounted, unidentified stores. The only previous sighting was at Gorkiy Airframe Plant Ordzhonikidze 21 [] Plant 21 is the manufacturer of FOXBAT aircraft.

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REFERENCES

IMAGERY

(TSR) All applicable imagery of suitable interpretability through [REDACTED] was used in the preparation of this report. 25X1

MAPS OR CHARTS

PACAF. US Air Target Chart, Series 200, Sheet 0200-22, scale 1:200,000 (UNCLASSIFIED)

DMAAC. Operation Navigation Chart, Series ONC, Sheet E-7, scale 1:100,000 (UNCLASSIFIED)

DOCUMENTS

1. USAF/AFCIN. Air Intelligence Information Report 1255840, *Irkutsk Aircraft Plant*, 29 May 59 (UNCLASSIFIED)

[REDACTED] 25X1

3. NSA. K/00/5693-77, *Aircraft Plant 39, Irkutsk, Produces BACKFIRE Bomber Components*, 011653Z Jun 77 (TOP SECRET [REDACTED]) 25X1

4. NSA. K/00/3443-78, *Wings for BACKFIRE Bomber Probably to be Produced at Plant 39, Irkutsk*, 181456Z Apr 78 (TOP SECRET [REDACTED]) 25X1

5. DIA. DDB-1923-2-78-SAO, *Foreign Aircraft Production (FOAP), Communist World (U)*, May 78 (TOP SECRET [REDACTED]) 25X1

[REDACTED] 25X1

[REDACTED] 25X1

REQUIREMENT

COMIREX J02

Project 280018DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [REDACTED] Warsaw 25X1
Pact Forces Division, Imagery Exploitation Group, NPIC, [REDACTED] 25X1

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